Coastal Protection Project.
Glen Isla Dune, Waihi Beach.
LVA Appendix C - Graphic Attachments.

October 2024

Isthmus.

Isthmus.

Document record

Issue	Revision	Author	QA	Date
Draft	A	RA	BC	24.09.30
Draft	B	RA		24.10.09

Contents

01. Existing Environment.

Site photos - Glen Isla Dune, Waihi Beach.

2024.

View across the site looking north, from the site (Council Reserve at the frontage of Gen Isla Place.)

View across the site looking south from close to Three Mile Creek.

View across the site looking south from the site, north end.

View across the site looking south from the beach, close to Three Mile Creek (at the north end of the site).

View south towards the site from Waihi Beach close to the mouth of Three Mile Creek.

Glen Isla Dune, Waihi Beach.

Photo record 2023/2024.

Cyclone Gabrielle and dune recovery.

Photo of the Southern Dune in February 2023

Photo record of the Southern Dune dated February 2023 following cyclone Gabrielle in front of 12 and 14 Glen Isla Place

Photo record of the Southern Dune natural sand accretion and plant growth dated July 2024 in front of 12 and 14 Glen Isla Place.

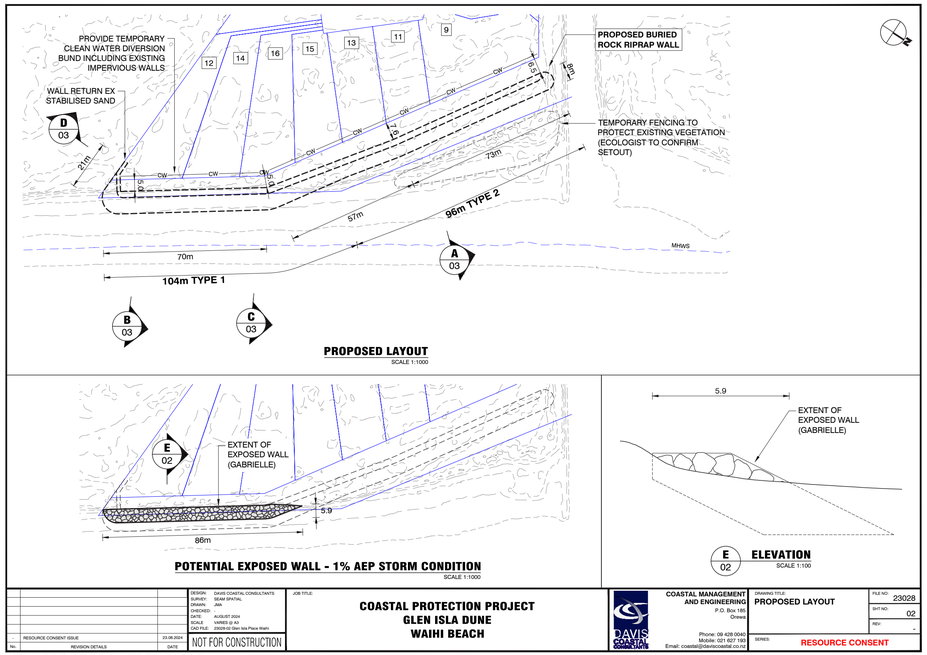
Images provided by the Glen Isla Protection Society (GIPS).

Context photos - Waihi Beach.

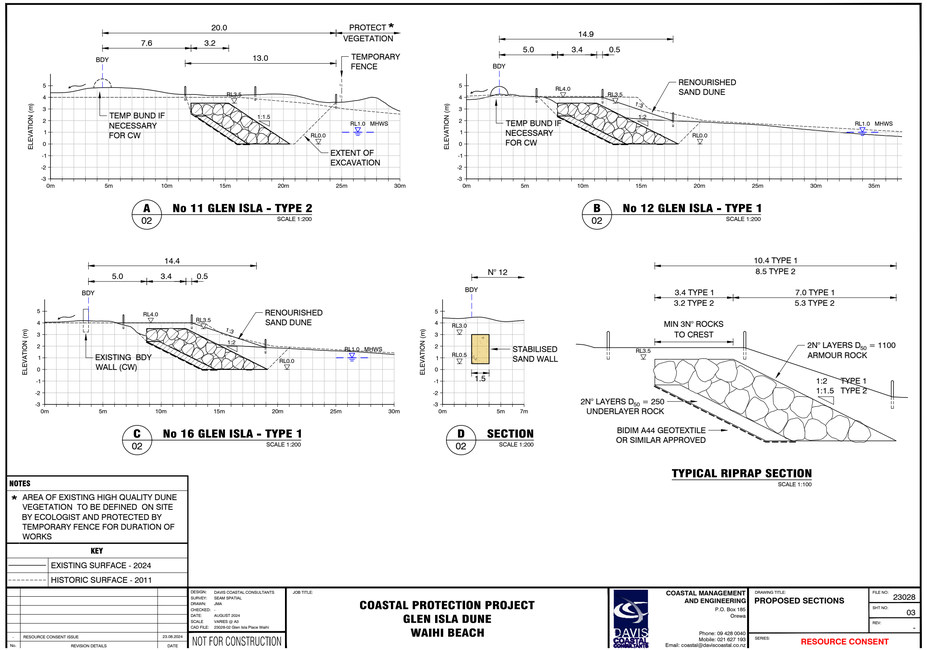
2024.

02. Proposal.

Proposed structure - layout and potential exposed wall.



Proposed structure - cross-sections.



NOTES

★ AREA OF EXISTING HIGH QUALITY DUNE VEGETATION TO BE DEFINED ON SITE BY ECOLOGIST AND PROTECTED BY TEMPORARY FENCE FOR DURATION OF WORKS

KEY

EXISTING SURFACE - 2024

HISTORIC SURFACE - 2011

No.	REVISION DETAILS	DATE
-	RESOURCE CONSENT ISSUE	23.08.2024

NOT FOR CONSTRUCTION

DESIGN: DAVIS COASTAL CONSULTANTS
SURVEY: SEAM SPATIAL
DRAWN: JMA
CHECKED:
DATE: AUGUST 2024
SCALE: VARIES @ A3
CAD FILE: 23028-02 Glen Isla Place Waihi

JOB TITLE:

COASTAL PROTECTION PROJECT
GLEN ISLA DUNE
WAIHI BEACH

DAVIS COASTAL CONSULTANTS

COASTAL MANAGEMENT AND ENGINEERING
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DRAWING TITLE: **PROPOSED SECTIONS**

FILE NO: 23028
SHT NO: 03
REV: -

SERIES: **RESOURCE CONSENT**

03. Statutory Planning Maps.

Bay of Plenty Regional Coastal Environment Plan.

13/08/2024, 11:51:15

Environment - Coastal Environment Zone

Environment - Indigenous Biological Diversity Area (IBDA) - B

1:2,257

0 0.02 0.04 0.07 mi

0 0.03 0.06 0.12 km

Eagle Technology, LINZ, StatsNZ, NIWA, Natural Earth, © OpenStreetMap contributors., Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors

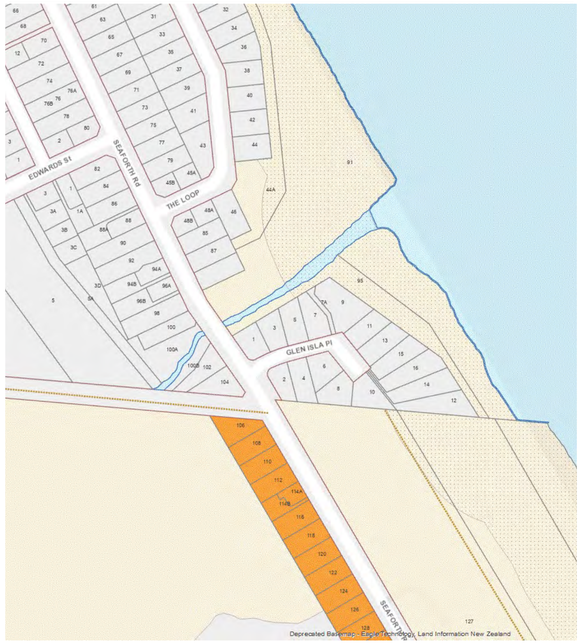
Map Created from BOPRC Online Platform

Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors | Bay of Plenty Regional Council | Ben Lee - Environmental Planner | Bay of Plenty Regional Council (Barry Perryman) | Lynda Walter aand Karen Greig, InSitu Heritage Ltd under contract to Environmen

Western Bay of Plenty District Plan.

Outstanding Landscape Feature.

Western Bay of Plenty Operative District Plan *Effective Date: 16/06/2012*



Map Legend

Tauranga Harbour Coastal Erosion
- Coastal Erosion Area - Primary Risk
- Coastal Erosion Area - Secondary Risk

Ōmokoroa Stage 3 Landscape Strip

Stream / River / Ocean

Property Boundary
- hydro
- parcel
- rail
- road

Walk / Cycle Way

Landscape Area
- Outstanding Landscape Feature - 50m (S7a & S8a) - 40m (S9a)
- Outstanding Landscape Feature

Dimension

Zone
- Commercial
- Commercial_Transition
- Commercial Transition
- Future Urban
- Future_Urban
- Horticultural Post Harvest
- Horticultural_Post_Harvest
- Industrial
- Light Industrial
- Lifestyle
- Medium_Density_Residential
- Medium Density Residential
- Natural_Open_Space
- Natural Open Space
- Residential
- Rural
- Rural_Residential
- Rural Residential
- TECT_All_Terrain_Park
- TECT All Terrain Park

Isthmus.

Western Bay of Plenty District Plan.

Zoning + Coastal Hazard Overlays.

Western Bay of Plenty Operative District Plan *Effective Date: 16/06/2012*

Map Legend

Tauranga Harbour Coastal Erosion
- Coastal Erosion Area - Primary Risk
- Coastal Erosion Area - Secondary Risk

Ōmokoroa Stage 3 Landscape Strip

Stream / River / Ocean

Property Boundary
- hydro
- parcel
- rail
- road

Walk / Cycle Way

Reserve Area

Coastal Erosion Area Primary Risk
- Coastal Erosion Area - Primary Risk

Coastal Erosion Area Secondary Risk
- Coastal Erosion Area - Secondary Risk

Dimension

Coastal Erosion Area – Rural

Flood Hazard

Coastal Inundation Area

Reserve

Zone
- Natural Open Space
- Residential
- Rural
- Rural_Residential
- Rural Residential
- TECT_All_Terrain_Park
- TECT All Terrain Park

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04. Visual simulation.

N

Scale
1:400@A1 | 1:800@A3

Legend

	Camera Position
	Proposed Berried Rock Riprap Wall

Viewpoint 1 - Current State.

Waihi beach, looking at Glen Isla dune from the south,

Original Photo RA | 50mm | DSLR Nikon D810 | 1112hrs 12 July 2024 | 1861432E 5854348N (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 0m
Field of View Approximately 110˚ horizontal (across 2 x A3 pages) & 34˚ vertical

Viewpoint 1 - Proposed.

Waihi beach, looking at Glen Isla dune from the south,

Original Photo RA | 50mm | DSLR Nikon D810 | 1112hrs 12 July 2024 | 1861432E 5854348N (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 0m
Field of View Approximately 110˚ horizontal (across 2 x A3 pages) & 34˚ vertical

Photosimulation Methodology Statement

- Photos were taken with a 50mm fixed lens on DSLR camera. Locations were fixed using a handheld GPS unit with accuracy of 5m. These points were cross referenced using the Auckland Council GIS information. Reference points in the landscape, such as trees and existing structures were also located to assist referencing of photo to digital model.
- A sequence of photos was taken from each viewpoint and stitched to form panoramas. Photos were overlapped by approximately 30% and edges cropped prior to stitching to eliminate edge distortion.
- A digital model was created. Computer images were generated within the digital scene from the same locations as the photos. The image was overlaid and aligned with the photo using key reference points and visual matching. (Photos were imported in RAW format to avoid degradation of the image, requiring resizing to match the computer image).
- The wire-frame was then switched off leaving the proposed activity in its correct location and scale relative to the photo. Lower parts of the proposed activity were erased using Photoshop software where they would be behind foreground items.
- The time and weather when the photo was taken was entered to the program in order to replicate lighting conditions.
- The completed photomontage is presented over two pages:
  - The photos are produced to replicate correct scale at the nominated reading distance (in this case 400mm).
  - Each photomontage is printed across two facing pages to illustrate a field of view of approximately 110° at a reading distance of 400mm. This approximates the field of human binocular vision. (But not peripheral vision which extends to approximately 200°)

Notes on use of Photosimulations:

- The Photosimulations are a useful tool but they cannot not precisely reproduce real life for the following reasons:
  - 2D Photography flattens an image compared to binocular vision.
  - Photography is static, whereas the human vision can scan and remember information.
  - Photographs are passive, whereas the eye seeks out detail.
  - The human eye can see more contrast than can be reproduced through photography.

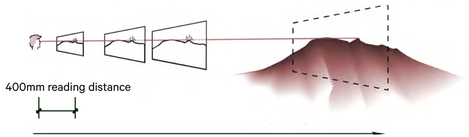

Figure 01: The relationship between reading distance and real life scale.

Visual Simulation Methodology

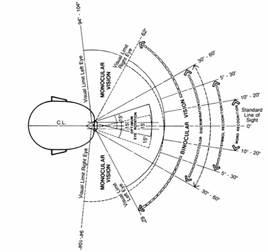

Figure 02: Binocular vision is approximately 124°. Field of view is approximately 110° across 2 x A3 pages at correct scale image for 400mm reading distance (vertical field of view is approximately 33°)

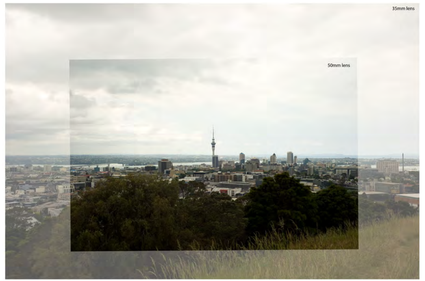

Figure 03: Comparison of 35mm lens and 50mm lens

Two images from the same location. With 35mm and 50mm lenses perspective is influenced by field of view, not by lens focal length. The overlaid portion is identical.

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